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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,921	03/01/2002	Timothy P. Goggins	NG-31336	3798

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EXAMINER	
KOYAMA, KUMIKO C	
ART UNIT	PAPER NUMBER
2876	

DATE MAILED: 08/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/683,921	GOGGINS, TIMOTHY P.
	Examiner	Art Unit
	Kumiko C. Koyama	2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 March 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Acknowledgement is made of receipt of Amendment filed on March 31, 2003.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the container (claim 35), the cup (claim 36) and the package (claim 37) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The applicant does not clearly define the term "C" in the phrase "at least a C" given in claim 10 line 2. The examiner respectfully requests the applicant to clearly define what is meant by "at least a C."

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-3, 22-23 and 42 and rejected under 35 U.S.C. 103(a) as being unpatentable over Clay (US 4,869,946, cited by the applicant).

Re claim 1 and 42: Clay shows a lenticular lens 10 having a front surface including a plurality of lenticules 11 and a back surface opposite the front surface (col 2 lines 57-59, Fig 1), an image 12 joined to the back surface of the lens (col 2 lines 62-67, Fig 1), and the image including a bar code 23 symbol having bars (col 3 lines 67+, Fig 3). Clay teaches that the lenticular lens and the image are in overlay relationship with one another (col 4 lines 57-60). Clay also teaches that a lenticular bar code angle is formed and may be perpendicular to the lenticules (col 4 lines 2-5, Fig 2). Although Clay does not specifically disclose that the angle is formed, one in ordinary skill in the art would recognize that the bar code angle may be formed at the space between the bars and the lenticles in order to determine with visibility and image appearance of the bar code through the lenses. The bar code symbol remains substantially visible despite any movement of the lenticular bar code images (col 4 lines 2-5).

Re claim 2 and 3: an image is visible at all angles (col 4 lines 2-3).

Re claim 22: Clay shows that the image 12 is disposed between the lenticular lens 10 and the substrate 16 (Fig 1).

6. Claims 4-6, 17 and 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clay as applied to claim 1 above, and further in view of Bravenec et al (US 6,073,854).

Re claim 4, 6 and 38: Clay fails to tech that the bars of the bar code symbol are skewed with respect to the lenticules of the lenticuar lens and are not aligned with the lenticules of the lenticular lens. Clay also fails to teach a bar code offset angle between the bars of the bar code symbol and the lenticules of the lenticular lens.

Bravenec shows that the lenticules of a sheet of lenticular material may be at an angle to the longitudinal axis (col 2 lines 24-30, Fig 1C).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to modify the teachings of Clay to the teachings of Bravenec and place a sheet of lenticular material having lenticules at an angle to the bars of the barcode symbol because a barcode symbol reader may misread the lenticules as one of the bars of the barcode symbol, and therefore the modification would avoid such misreading and errors.

Re claim 5, 17 and 39-40: Clay fails to teach that the bars of the bar code symbol are perpendicular to the lenticules of the lenticular lens. Clay also fails to teach that at least one of the plurality of lenticules overlays more than one bar of the bar code symbol. Clay also fails to teach that the lenticules are not parallel to the spaced apart elements of the bar code and the lenticules are normal to the spaced apart elements of the bar code.

Bravenec shows that the lenticules of a sheet of lenticular material may be perpendicular to the longitudinal axis (col 2 lines 24-30, Fig 1B).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to modify the teachings of Clay to the teachings of Bravenec and place a

sheet of lenticular material having lenticules perpendicular to the bars of the barcode symbol because a barcode symbol reader may misread the lenticules as one of the bars of the bar symbol, and therefore, the modification would clearly distinctively show the difference between the bars and the lenticules and would avoid such mireadings and errors. Furthermore, one in ordinary skill in the art would also recognize that when the sheet of lenticular material having lenticles perpendicular to the bars of the barcode symbol would also comprise at least one of plurality of lenticules overlaying more than one bar of the bar code symbol.

7. Claim 7-9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clay as applied to claim 1 above, and further in view of Addy (US 6,386,448).

Clay fails to teach a hand-held barcode scanner to read the bar code through the lenticules of the lenticular lens.

Addy teaches a hand-held scanner that scans or reads a product identification code such as a Universal Product Code (UPC) (col 5 lines 26-35).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Addy to the teachings of Clay in order to read the barcode symbol on the image through the lenticules of the lenticular lens to uniquely identify the image or the product in a faster manner.

8. Claim 10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clay as modified by Addy applied to claim 7 above, and further in view of McGinty et al (US 6,010,970).

Clay as modified by Addy fail to teach that the bar code symbol has an ANSI readability grade of at least a C and the bar code symbol is one of a Code 39 symbology, an Interleaved 2 of

5 symbology, a Codabar symbology, a Code 128 symbology, a Code 93 symbology, and a Postnet symbology.

McGinty teaches a bar code readability grade of C using Code 39 symbology (col 3 lines 47-51).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of McGinty to the teachings of Clay in order to create a clearly defined, but precise, barcode symbol so that the barcode can contain details or information on the product to identify the product in a faster manner.

9. Claims 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clay in view of McKee (U.S. Patent Application Publication 2002/0038917). The teachings of Clay have been discussed above.

Clay fails to teach that the lenticules of the lenticular lens have a width of less than about 0.006667 inches and that the lenticular lens includes at least 150 lenticules per inch (LPI).

McKee teaches 200 lenticules per inch, which calculates to a width of 0.005 inches for each lenticule (Page 1, Paragraph [0004], lines 4-8).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of McKee to the teachings of Clay in order to reduce the obtrusiveness by decreasing the width of the lenticules.

10. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clay in view of Fotland (US 4,935,335). The teachings of Clay have been discussed above.

Clay fails to teach that the lenticules of the lenticular lens have a focal length and a gauge thickness and wherein the focal length is substantially equal to the gauge thickness.

Fotland teaches that the focal length of each lenticles should be equal to the thickness of the lenticular sheet (col 1, lines 30-35).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Fotland to the teachings of Clay in order to provide a multiple imagining lenticular lens assembly to provide more information.

11. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clay as modified by Fotland as applied to claim 13 above, and further in view of Sandor et al (US 5,330,799). The teachings of Clay as modified by Fotland have been discussed above.

Clay as modified by Fotland fail to teach that the gauge thickness is less than about 10 mils.

Sandor teaches that transparent base film has a thickness 10 mils (col 8, line 35).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Sandor to the teachings of Clay in order to have sufficient thickness to provide lenticules with clear image and size.

12. Claims 25-27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clay in view of Gottfried et al (US 6,329,987). The teachings of Clay have been discussed above.

Clay fails to teach that the lens comprises an ultraviolet curable resin and a plastic material selected from the group consisting of: polyester vinyl, polycarbonate, polyvinyl chloride, polyethylene telephthalate, and amorphous polyethylene terephthalate.

Gottfried teaches that the lens can be made of polyvinyl chloride, polyethylene telephthalate etc and can be printed with image printed with ink that can then be cured with ultraviolet light (col 12, lines 38-44 and lines 54-55).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Gottfried to the teachings of Clay in order to obtain an accurate information by providing a clear translucent material and ink that can be read by a machine, which obtains information in a fast and an accurate manner.

13. Claims 31-33 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clay as modified by Bravenec et al as applied to claim 5 above, and further in view of Addy. Clay has been discussed above.

Clay fails to teach that the bar code symbol is a Universal Product Code (UPC) and is read by a bar code reader.

Addy teaches that a hand-held scanner scans or reads a product identification code such as a Universal Product Code (UPC).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Addy to the teachings of Clay as modified by Bravenec in order to read the barcode symbol on the image through the lenticules of the lenticular lens to uniquely identify the image or the product in a faster manner.

14. Claims 18, 19, 20, 21, 24, 28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clay as applied to claim 1, further in view of Guest (WIPO 00/09319). The teachings of Clay have been discussed above.

Clay fails to teach that the image is printed directly to the flat back surface of the lenticular lens, the image printing method, the image is not printed onto the lenticular lens by a photographic printing process, the lens comprises platic material, and the image is applied to at least one of package, a cup, a container, and a label.

Guest teaches a volumn-deifining items having lenticular lens technology to provide images on the produced items. Items may include containers, boxes, cups (Page 1, lines 6 and 15-18). The system includes a lenticular lens on one surface of the plastic film and a flat surface on the other (Page 1, lines 21-22). The flat surface is printed with an image (Page 2, line 8-9) and affixed on the surface of a volume-defining item, wherein the lenticular lens assembly serves as a label. Guest also teaches that the printing is done by a sheet fed offset (lithographic), web fed offset (lithographic), and wed fed roto-gravure (Page 2, lines 4-5).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Guest to the teachings of Clay in order to provide a means for producing an attractive, aesthetic display with enhanced marketing and advertising appeal.

15. Claims 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clay in view of Guest.

Clay shows a lenticular lens 10 having a front surface including a plurality of lenticules 11 and a back surface opposite the front surface (col 2 lines 57-59, Fig 1), an image 12 joined to the back surface of the lens (col 2 lines 62-67, Fig 1), and the image including a bar code 23 symbol having bars (col 3 lines 67+, Fig 3). Clay teaches that the lenticular lens and the image are in overlay relationship with one another (col 4 lines 57-60). Clay also teaches that a lenticular bar code angle is formed and may be perpendicular to the lenticules (col 4 lines 2-5, Fig 2). One in ordinary skill in the art would recognize that the bar code angle may be formed at the space between the bars and the lenticles. The bar code symbol remains substantially visible despite any movement of the lenticular bar code images (col 4 lines 2-5).

Clay fails to teach a label, a container, a cup, and a package.

Guest teaches a volumn-deifining items having lenticular lens technology to provide images on the produced items. Items may include containers, boxes, cups (Page 1, lines 6 and 15-18). The system includes a lenticular lens on one surface of the plastic film and a flat surface on the other (Page 1, lines 21-22). The flat surface is printed with an image (Page 2, line 8-9) and affixed on the surface of a volume-defining item, wherein the lenticular lens assembly serves as a label.

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Guest to the teachings of Clay in order to provide a means for producing an attractive, aesthetic display with enhanced marketing and advertising appeal.

Response to Arguments

16. Applicant's arguments filed March 31, 2003 have been fully considered but they are not persuasive.

Regarding the arguments pertaining to the drawing, the examiner believes that it is significant to include a drawing of the package, the container and the cup because the independent claim is claiming the item having the lenticular lens assembly, not lenticular lens assembly solely by itself.

Regarding the arguments pertaining to the use of "at least C" being indefinite, the examiner would like to point out the claim does not explain the meaning or definition of the "at least C." The letter C is a character from the alphabet until it is described and explained the

interpretation of C in terms of ANSI standards, or what must be satisfied in order achieve the grade C level.

Applicant's arguments regarding that Clay does not teach "a bar code angle between the bars of the bar code symbol and the lenticules," the examiner respectfully disagrees. The Applicant does not claim any description of the angle being form by two adjacent lines diverging from a common point, wherein the lines are bars of the bar code and a line formed parallel to the direction of the lenticules. Rather, the claim could be interpreted as an angle located anywhere between the bars of bar code symbol and the lenticules, which could be an angle formed at the radii of the lenticular arc that is located between the lenticles and the bars of the bar code. It could also be interpreted as any angle formed where the common point is located between the bars of the bar code and the lenticules observed from a top view of the lenticular lens assembly. In this case, the examiner has interpreted bar code angle as the angle in which the bar code is viewed and the common point being located between the bars of the bar code and the lenticules of the lenicular lens. As shown in Fig. 2, reference numbers 13, 14 and 15 are viewing angles having a common point, which is located between the bars of the bar code and the lenticules. The image is visible at all angles, whether the card is turned about the optically active axis or optically in active axis. It could also be said that the bar code is possibly viewed from the side either the use rotating himself or rotating the card in a 360 degree manner. As indicated above, when the claims are interpreted in a board manner, the claimed invention reads on the Clay reference.

The Applicant argues that "Bravenec discloses no reason for cutting patterned lenticules accord the card, and more significantly, fails to disclose that diagonal lenticules, for example,

enchance readability, much less the readability of the bars of the bar code that are formed at an angle relative to the lenticules." However, examiner submits that it is not necessary that the references actually suggest, expressly or in so many words, changes or possible improvements in order to combine references together and that the references are shown to indicate that the given invention or recited claims are presented in the prior art. In re Scheckler, 58 CCPA 936, 438 F. 2d 999, 168 USPQ 716 (1971). Although it is not necessary that the references actually suggest the changes or improvement, the examiner understands that there must be some reason why one skilled in the art would be motivated to make the proposed combination of references. In re Nomiya, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make modification be expressly articulated and the combination of references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. In re McLaughlin, 170 USPQ 209 (CCPA 1971).

Lenticular lens technology is normally used when there is an image to be viewed when it is viewed at a certain angle. It is even disclosed in Bravenec that different images are viewed through the lenses when the face of the card angled one way or another. Using this knowledge and teachings of Brevenec of slanted lenticles, it would have been obvious to provide a bar code symbol where each bar is arranged in a vertical manner having diagonally arranged lenticules positioned over the card to create different bar code image when view through the lens. In such case, the bars of the bar code and the lenticules would create an angle with a common point being the location where the two lines merge. The lenses could create thicker or thinner bars depending on how the lenses are arrange, which creates a different data when read by the reader. If the lenses are not arranged in a correct manner, the image would be incorrect and subsequently

the data taken through the bar code reader would be incorrect as well. It is also a matter of design choice whether the lenticles are formed in a side-by-side manner or in a diagonal manner, and it depends on the desired image to be produced. Bravenec reference have been combined for the above reason.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kumiko C. Koyama whose telephone number is 703-305-5425. The examiner can normally be reached on Monday-Friday 7am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on 703-305-3503. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Kumiko C. Koyama
July 28, 2003

MICHAEL G. LEE
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